

**Meeting Description:** Michigan Geographic Framework Users Meeting

**Date:** March 9, 2000

**Time:** 10:00 a.m.

**Location:** Lewis Cass Bldg., 1st Floor, Dept. of Management and Budget Large Conference Room

I. Approval of February Meeting Minutes

II. Geographic Framework Program

Michigan Information Center (MIC) Project Update Status

1. Phase 2 / Seaming Status

Rob Surber, MIC, reported that the project is now in different phases. MIC has completed Phase 2 (road update and information) for 71 counties. Muskegon County will be complete early next week. Saginaw and St. Clair Counties will be complete in a couple of weeks and Kent and Washtenaw Counties will be complete in 2-3 weeks. Only 4 counties have not reached Identity Point in Phase 2. MIC has added a 2<sup>nd</sup> shift to work on Wayne County. They are currently working on the western portion. By the end of the summer MIC hopes to complete the project. MIC is also been working on seaming data. They are stitching data along county lines - topography and attributes. MIC has completed the Upper Peninsula – this is a major accomplishment. They are now working on Emmet, Cheboygan, and Charlevoix areas now. MIC doesn't finish seaming a portion until data comes back from Michigan State Industries (MSI) and goes through Michigan Department of Transportation's (MDOT) quality controls. MSI is adding road ownership, functional class data, and bridge identification numbers.

2. Framework Classification Codes

Rob Surber, MIC, reported that the plan is to have the first production version of framework for the Upper Peninsula delivered this spring. When it comes out there will be additional data, Framework Classification Code (FCC), into the base map. A draft of the Framework Classification Attribute Themes was distributed. The FCC will be automated as much as possible with the existing base map data. The plan is to come up with a hierarchical classification. A geographic information systems (GIS) user will be able to search detail or general as needed. Rob would appreciate all comments you may have regarding this draft. The FCC will develop over time. At this time, Bill Enslin's, MSU Center for Remote Sensing, themer tool must combine Michigan Resource Information System (MIRIS) level and census feature classification codes (CFCC) in a combination of ways that make it difficult for users. When the next production version of framework is released, there will be at least one item to that will be cleaned up.

Suzanne Gray, University of Michigan – Map Library, asked if the FCC would include non-visible boundaries state house and senate district data.

Rob Surber, MIC, responded that the non-visible boundaries would be handled in a hierarchical manner. Framework is all one level and can build various coverages and themes based on the attributes. Each feature in the one-level base map would have one classification code. More than one non-visible boundary is possible on a particular feature. In that case, MIC is looking for a hierarchical way to document. A state boundary will be called a state boundary. The legislative districts will fall under school districts at this time; since school district boundaries will have more significance. Users will still be able to build through attributes in database, but each will have only one FCC associated with it. Rob would appreciate any comments.

Joyce Newell, MDOT, asked what the plan is to deal with regional and zone areas for each department's administrative areas.

Rob Surber, MIC, responded that type of data would not be tied directly into the core geographic framework base, but there would be related tables to keep track of that type of data. It will be the agencies' responsibility to keep those relationships established with the base. MIC will look at viewing technology for easy extraction. There will be numerous business data sets that agencies will want to build on the base map. Each department would decide what data they want available on framework. As framework finishes production mode would want to address how to make more useful to users.

Bill Enslin, MSU Center for Remote Sensing and GIS, asked how conflicts in coding between TIGER and Michigan Resource Information System (MIRIS) would be handled.

Everett Root, MIC, responded that MIC would review when testing to see what the conflicts are and how to handle them. Alden Leatherman, MIC, would put them into an AML to attribute and will have to test for conflicts. For most of the transportation features would be able to use something other than the Census Feature Classification Code (CFCC) level.

Rob Surber, MIC, commented that the goal is not to go down too far in the hierarchy until there is a systematic review. Then it will be part of the workflow so that when something is corrected, they will check classification to be sure it is correct.

Everett Root, MIC, added that a lot of hydrography would not have a level and will probably go into 'all other' for now. All of the queries used to create the FCC's will have better documentation as it is finalized.

### 3. Polygon Build

Rob Surber, MIC, reported that as part of Production Version 1, MIC will clean up the polygons that have not been cleaned - census tracts, census block groups, school districts, and county commissioner district boundaries. Tests have been done to the tri-county area and discovered that it is manageable. Users may start then building datasets to the block group level. A lot of regions can be built now, but there are places where the topology has been updated so that the polygons don't always close - they will be fixed. Every feature would have the attribute codes for the school districts, county commissioner districts, etc., so it won't just be boundary cleanup but all features would be identified as either in or out of a particular polygon.

Everett Root, MIC, added that the census boundaries are the ones that correspond with the 1990 census data.

Eric Swanson, MIC, commented that 2000 TIGER is scheduled to be released between January and April of 2001 and MIC would have to be prepared to work on it immediately. The redistricting data for the Census Public Law 94-171 comes out on April 1. TIGER, not framework, would be used for redistricting. As soon as the census data (total population, racial characteristics, voting age population) is released, users would want to map it and look at in framework with their data.

Joyce Newell, MDOT, asked if boundaries from 1990 census would be kept.

Rob Surber, MIC, responded that the plan is that there would be previous census tabulation area and also the current one. When 2010 comes out users would be able to go back to 2000 and review the data. 99% of all data requests are at the block group level.

Eric Swanson, MIC, added that there are 9,600 block groups and 250,000 blocks in the state. To clean and build polygon data for all census blocks, it would cost thousands of dollars and would actually meet only a few requests.

Rob Surber, MIC, stated that SEMCOG has been building blocks for their region. Anything that has been built and goes through quality control can be made available through framework. If a state agency needs blocks for the rest of the state, MIC can be put it into the production schedule. The only interface to the Lower Peninsula is the Mackinaw Bridge. The production version will be under the old data model in ArcInfo. Plan to work on a parallel development exercise to move it to new model. It will have lookup tables with names of city, township, county, school district, etc.

### 4. Repositioning

Rob Surber, MIC, reported that framework is a MIRIS positional 1:24,000 product. MIC did conflation of TIGER to that product and there are inconsistencies in positional accuracy. It is topologically correct, however MIC is working on a project to reposition this version to a consistent set of digital ortho photography statewide. Working a pilot project in Monroe County to look at specs, decision rules, costs, and time. Everett Root, MIC, is working on quarter quarter quad by quarter quarter quad. MIC will be presenting a repositioned product with notes of why and how things were done. Rob would appreciate comments and feedback. The work will be done on the production version. The production version will be released pre-repositioning. In the pilot, MIC is trying to make as few topological corrections as possible, so they don't have to run validation programs to all attributes that are already in the database. That should allow quick turn around. Editing will be another process.

Bill Enslin, MSU Center for Remote Sensing and GIS, asked if there would be a separate attribute in the database to indicate problems that have not been corrected.

Rob Surber, MIC, responded that MIC would have complete feature base Metadata on positional accuracy and where it came from.

Bill Enslin, MSU, commented that they are having a problem with rectifying aerial photography where digital ortho quads (DOQs) are not available. Then have to use the old MIRIS base or the new framework files and there is an uncertainty as to whether what you are tying to is correct or not.

Rob Surber, MIC, responded that users would be able to select by feature exactly what has been done. This is a dynamic product. There will be some features that aren't in digital ortho's because of the date. This is an evolving living product. Rob is interested in feedback on pilot project. MIC is considering having analysis on the accuracy of digital product from an independent source. Possibly would take a sample set of points, go to known intersections and get a global positioning system (GPS) reading to verify work.

#### 5. Cabinet Meeting Presentation

Rob Surber, MIC, reported that MIC presented the framework viewer product, which has state agencies' business data sets, tied to it, to the Governor's cabinet. Data sets (Dept. of Natural Resources Sleepy Hollow State Park, State Police crash data, Dept. of Environmental Quality's contaminated sites and underground storage tanks, etc.) being worked on by the agencies were presented.

Eric Swanson, MIC, commented that the directors got a good flavor of what MIC is doing. By doing demonstration of all the departments' data sets quickly (20 min) and tried to speak through the involvement and how it was done. It turned into a nice package. It went well. The directors were interested and asked questions

#### 6. Family Independence Agency (FIA) Partnership

Rob Surber, MIC, reported that since the last meeting FIA has become a partner in the framework program. FIA will be meeting with MIC regarding ways they can use framework within their department. FIA is looking at their data on maps and doing spatial analysis.

Eric Swanson, MIC, commented that FIA would probably drive the development of data sets (nursing homes, day care centers, and public transportation) that they don't own but are related to FIA delivering services to their customers.

### B. Base Map Scale Versions

Rob Surber, MIC, reported that MIC wants to come up with standard products that are general versions of framework. Not everybody needs a 30gig hard disk to do displays. With web mapping, people will want different versions of framework and have consistency among themes. MIC has a plan to come up with named generalized versions of framework utilizing existing products and customizing the framework base to those so all county boundaries line up at the shoreline, roads, and census data, etc. There would be other versions that would have to be customized and generated by other agencies. With this approach, they could meet needs of most users' and the state would save a lot of time sharing information because we would have a consistent product. A Shoreline Technical Sub-Committee has been established to look at small-scale shoreline and county boundaries and large-scale. They are first focusing on the small-scale version of county and shoreline because a lot of data sets stop there. The goal is to develop a common shoreline, which is a broad issue. They are trying to come up with consistent framework definitions, so users will know what the Great Lakes shoreline is and where the definitions came from. The Attorney General defines cities and townships as going out to the Great Lakes shoreline, the state boundary goes out to the middle of the lake, and for jurisdictional purposes it goes to the Great Lakes shoreline - but where is that and how it would be represented in framework?

Discussions would be posted to the GIS Listserv. If you are interested in listening in or joining the conversation, please sign up on the MIC web site. Summaries of meetings will also be posted. The committee is reviewing the United States Geological Survey (USGS) 1:100,000 and 1:2,000,000 scale products and how the boundaries were generated. Mark Coppersmith, USGS, e-mailed information about how these boundaries were generated. John Clark, Michigan Department of Environmental Quality (MDEQ), is researching definitions for this discussion. The committee wants to establish a 1:100,000, a 1:2,000,000, and possibly a 1:5,000,000

product. Again the goal is to have a consistent shoreline that all state agencies use as a starting point. If interested in contributing, contact Rob at (517) 373-7910 or surberr@state.mi.us. The next meeting is on non-shoreline county boundaries. There has been discussion about getting corner points of counties as a starting point to firm up county boundaries. Framework has attempted to come up with a consistent boundary set that is fairly good. MIC has received county corner GPS points from Ionia County that are 3-10 meters off from framework county corners. Another discussion will be tying this into the repositioning effort.

### III. Michigan Department of Natural Resources (MDNR) Projects and Activities

Sherman Hollander, MDNR, reported that the MDNR is addressing administrative aspects of the second year of a three-year cooperative agreement with USGS digital ortho photo project. The second year plan is aimed at filling in the digital ortho quarter quad (DOQQ) coverage for the state. It will involve 1,906 quarter quads mostly in the lower central and southern Lower Peninsula. MDNR is in process of submitting a proposal of Phase 2. They have been working with Mark Coppersmith, USGS, and will submit the proposal to get a formal agreement in place. MDNR is also working to get legislative authorization to spend the federal money. They will be participating with three federal agencies – NRCS, FSA, and USGS. EPA is interested in a few southeast counties and will be cost sharing the \$1.5 million with participating agencies. The state's share is \$385,000. MDNR hopes to have paperwork settled by summer and can issue work to vendor. Estimating completion within 12-18 months.

### IV. Michigan Department of Transportation (MDOT) Projects and Activities

Joyce Newell, MDOT, reported that MDOT has begun 'sufficiency file' posting to framework. The goal is to have it accurately positioned on framework in time to collect data this fall on new segmentation. MDOT has begun work on the Highway Pavement Management System (HPMS) segmentation for the federal aid system on framework. MDOT is waiting to get data sets to MIC to program to make it easier to attribute segments. Dennis Kenaga, MDOT, has been working on the Upper Peninsula to determine differences between 'traffic and safety' data and framework. They are finding minor differences or recent changes yet to be added into framework. Once framework is complete, then will work on trunkline distance accuracy. MDOT is getting feedback from local areas regarding data they are interested in seeing on framework. Discovered that Barry County needs functional class updates. MDOT will provide MIC with 4 counties this week. Will collect all 'unbuilt road' data and provide to MIC to determine whether to put on framework at this time.

Sherm Hollander, MDNR, asked if the paved and unpaved status of roads is by county level.

Joyce Newell, MDOT, responded that she believes so – their 'needs file' has that information, but it is old. She does not believe that counties and cities are required to provide that information to MDOT. The Act 51 committee is proposing a change in that policy.

Eric Swanson, MIC, commented that the Act 51 draft report recommends that framework be used as a foundation for a central data repository for all roads.

Joyce Newell, MDOT, added that at this time the paved and unpaved data is displayed on all MDOT county maps. Until local jurisdictions are required to provide information, Joyce is unsure of information accuracy.

Rob Surber, MIC, commented that this data would be a good candidate for framework and would be added to the classification attributes.

### V. Michigan Department of Environmental Quality (MDEQ) Projects and Activities

Steve Miller, MDEQ, reported that they have completed their county meetings. They delivered framework, LandScan aerial photos, Bill Enslin's, MSU Center for Remote Sensing and GIS, viewer to the county health department. The counties showed a lot of interest and could see the potential. Four districts did not attend. Universities will provide technical support. MDEQ has reactivated getting Spatial Database Engine (SDE) online. SDE 8.0 is working better than the old version and they will load statewide framework coverage for use. ArcExplorer training is being offered within their division, have developed curriculum, and will train 25 people per a 4-hour session.

Eric Swanson, MIC, asked that now that the Upper Peninsula is seamed, can we investigate the water shed coverage and how it would apply.

Steve Miller, MDEQ, responded that he and John Clark, MDEQ, are interested in putting those coverages together.

## VI. Michigan State Police (MSP) Projects and Activities

Mike Miller, MSP, reported that the Criminal Justice Information Center's goal is to do crime mapping on a limited basis throughout the state. They have contacted several agencies to get address data. MSP has crime information, but need addresses. The long-range goal is to put the data on the Internet and make it available for public use.

Rob Surber, MIC, reported that MIC met with MSP regarding crash data. A state police officer will fill out a crash report form and identify the crash location. That location information will funnel into framework. Information from the forms is not always easy to work with. Considering working with Michigan Tech University because they are the developers of the crash location link to the framework to develop a way to handle protests and clean up anything that doesn't match framework – may be a new road that needs to be added. Looking for ways to make the map a better product.

Eric Nischan, MSP, reported that the Emergency Management Division (EMD) houses the state emergency center. They are moving toward a GIS server system with web access for mitigation and response teams. They are moving into testing of the system and are working with Science Application International Corporation (SAIC). The run date is set for October 1, 2000. At this time, the division is primarily using GIS for internally. By the end of the year, the EMD hopes to have a fully functional system that will be active for response. Their strategic vision for the MSP is to move to a web base system that EMD hopes to be tied into.

## VII. MIC Projects and Activities

### A. Statewide Land Database (SWLDB) Facility ID Standard

Rob Surber, MIC, reported that the SWLDB facility ID standards were distributed at the last meeting. The project will map all land infrastructure and facilities. The problem is that the facilities aren't commonly identified. Each department has information but it doesn't all connect. MIC is receiving comments from departments about the draft standards. For a copy, contact Rob Surber at (517) 373-7910 or [surberr@state.mi.us](mailto:surberr@state.mi.us). All comments and suggestions are appreciated.

### B. Michigan Employment Security Administration (MESA) Geocoding

Rob Surber, MIC, reported that the MIC is geocoding the employment locations in the state. MIC is discussing with MDOT better ways to work with employment agencies and use their data for mapping on a continual basis. The data would then be provided to regional agencies as well as state agencies. There are problems with collection of data and the quality of data. There has been a Listserv group to discuss ways to clean up data. The biggest problem is that it is a voluntary collection. Some states require employment location information be reported - Michigan does not. There are a lot of reasons why employer work site locations should be reported – one of which is that the data is used for planning of roads, infrastructure, etc.

### C. Geographic Information Systems (GIS) Viewing

Eric Swanson, MIC, reported that at the last meeting we saw the viewing technology (SWLDB, general viewer, SWAP viewer) being worked on by Bill Enslin, MSU. Many people want to come to one place and say "show me". MIC is committed to the development of technology and they are discussing with Bill Enslin to determine what MSU's role would be. The goal is to make the viewer available not only to state agencies but also to the general community and want to provide open access to spatial data that is being created.

### D. Clearinghouse / Web Survey Update

Rob Surber, MIC, reported that MIC is working on a project to develop a clearinghouse site to find geo spatial information – where data can be found, quality of data, etc. It is being developed with Federal Geographic Data Committee (FGDC) standards so that it will tie into the National Spatial Data Infrastructure (NSDI). MIC has developed a web survey and Dan Metzger, MIC, is presenting it to Regional GIS Advisory

Committee meeting today at SEMCOG. IMAGIN has a focus group that will test it. The survey will collect not just Metadata but also information about projects that agencies are working on, key contacts, training needs, software, hardware, etc.

Eric Swanson, MIC, commented that the survey would also collect investment information. \$12,000,000 has been spent amongst departments on coordinated GIS investments since 1996 and this does not include all of the application development that is going on within the agencies.

Rob Surber, MIC, added that the final checks are being done this week, changes will be made next week, and will be released within 1-2 weeks.

#### E. Census 2000

Rob Surber, MIC, reported that the MIC is the lead agency in the state for leading census promotion. Everybody should have received a census letter in the mail. MIC hosted a Census 2000 Promotion and Data Users Conference in February. Michigan's Lt. Governor, major metropolitan areas, local counties and townships and others attended to help promote the census. The conference got good press coverage and the census bus was unveiled.

#### F. Local Michigan GIS Users' Meetings

Rob Surber, MIC, reported this monthly meeting is a tool to provide dialog and communication between local counties, federal, regional agencies, and state agencies. A lot of local agencies in the Lansing area attend. Agencies outside of the Lansing area have expressed an interest in the meetings but are prohibited by the distance involved in travelling. MIC has proposed having a few meetings around the state hosted by local agencies to interact with people at their place of business. MIC is planning on approximately 5-6 local meetings and currently have 3 locations that are interested – one in the Upper Peninsula, one in the northern Lower Peninsula, and one in southeast Michigan. If you are interested in hosting a meeting in your area, please contact Rob Surber, MIC, at (517) 373-7910 or [surberr@state.mi.us](mailto:surberr@state.mi.us).

#### G. Governor's Visit

Eric Swanson, MIC, reported that the governor of Michigan visited the MIC. The governor has had an interest in visiting the MIC for about a year. His visit lasted for 1 hour and 40 minutes. He toured all areas and asked a lot of detailed questions. He looked at how we build framework from digital ortho's and asked specific questions about the process and also the geocoding of underground storage tanks. Eric showed the governor the viewer and application data sets from the various departments. Rob Surber, MIC, commented that this was positive experience for the GIS community in general. Often GIS functions go unnoticed.

Eric Swanson, MIC, added that at the moment GIS in Michigan is at a level it has never been before. We all have a job to do to continue the momentum and get applications out there so that the policy makers can use the technology for decision making. Showing the end product funds the development of data.

### VIII. Regional Projects and Activities

Not present

### IX. MSU Center for Remote Sensing and GIS Projects and Activities

Bill Enslin, MSU, reported that they are working on embellishing the lakes – there are 28 counties that don't have full process with lake names. The Center is county seaming lake polygons and two-bank rivers. The rollout provided opportunities for others to ask questions about the files. For example, when you query the drains or rivers will want to change for custom themes to create a route and denode so they can attach to one feature. It is more of a challenge with hydrography because it is not all fully attributed properly and has gaps. Some of the work would be done automatically through revision of the Themer Program and the rest would be done manually. Under Executive Information System (EIS) the Center statewide views were ready and passed through the Themer Program. The Center looked at generalizing the county boundaries and highway layers to provide a small-scale map. The Center delivered MRSID files (approaching 60,000 images and converted to 30:1 compression ratio) to MDEQ. The quality is not as good as a LandScan CD, lose color fidelity. The Center and MDEQ have been working to web enable using MRSID server. Currently activities have been

largely Intranet based but are looking at how to open that up. Basic Science for Remote Sensing Initiative (BSRSI) is a research project that the Center is working on. The main activity has been in Brazil and other places and there is large funding. There is a web site (link available at [www.crs.msu.edu](http://www.crs.msu.edu)) that has Landsat 7 images for the state of Michigan. Landsat 7 images sell \$650 per seam.

Steve Miller, MDEQ, reported that MDEQ put the images on their server for their department and with a special application developed by John Clark, MDEQ, it is possible to enter a section, town, and range and Internet Explorer will bring up that image. It is a quick way to get an aerial picture.

#### X. County / Local Projects and Activities

Zubair Ahmad, City of Lansing, reported that they have developed a GIS base map and applications that included 2,500 parcels for the City of Lansing and road network for local roads. They are looking for funding and feels that base map will get stale. For purpose assessors and planning offices the data has already started changing. Zubair saw a line item in framework classification for local roads asked if the city would be allowed to the use data at some point or will it be state owned.

Joyce Newell, MDOT, responded the data would include all roads that are certified. MDOT does not have local road data but do have on state trunklines at this point.

Eric Swanson, MIC, commented that it is possible to integrate the Average Daily Traffic data with framework.

Rob Surber, MIC, added that depending on what formulas are needed for Act 51 funding, the requirements might change.

Joyce Newell, MDOT, commented that as the data warehouse is formed by the Act 51 legislation that data may require it from cities and counties.

Rob Surber, MIC, added that as the MIC finishes seaming the Lansing area, they could share that data with the City of Lansing.

#### XI. Federal Projects and Activities

Not present

#### XII. Other Issues

Carol Woodman, Michigan State Industries (MSI), introduced Cary Adranga, who stated that he would be attending these meetings more often. Carol then distributed a current status map of what the GIS Factory at the Lakeland Facility has completed. MSI has finished Bay County and delivered it to MDOT and the only county remaining is Berrien County. MSI is working on an All-Season Roads Project for MDOT. Highway Performance Monitoring System (HPMS) project soon. Hope to add a second shift soon, but there are security issues to work out.

Leelyn Johnson, Library of Michigan, reported that there is a new state librarian, Kristy Brandau.

#### XIII. Next Meeting Date

April 6, 2000, 10 a.m. until 12 p.m., Lewis Cass Building, 1st Floor, North Wing, Department of Management & Budget Large Conference Room

\*\* If any changes or corrections are to be made to these minutes, please contact the Michigan Information Center (517) 373-7910